

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

**INFORMATION DISCLOSURE
STATEMENT**

Docket Number
10020/30301

Application Number
10/723,953

Filing Date
November 26, 2003

Examiner
Not Yet Assigned

Art Unit
1772

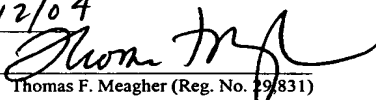
Invention Title
**MULTILAYER ORGANIC
PHOTODETECTORS WITH IMPROVED
PERFORMANCE**

Inventor(s)
FORREST et al.

Address to:
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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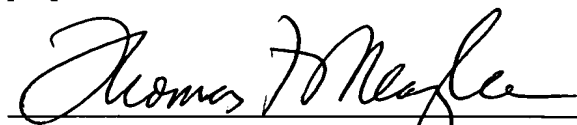
Date: 3/12/04

Signature: 
Thomas F. Meagher (Reg. No. 29,831)

1. In accordance with the duty of disclosure under 37 C.F.R. § 1.56 and in conformance with the procedures of 37 C.F.R. §§ 1.97 and 1.98 and M.P.E.P. § 609, attorneys for Applicants hereby bring the following references to the attention of the Examiner. The references are listed on the attached modified PTO Form No. 1449. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.
2. A copy of each patent, publication or other information listed on the modified PTO form 1449 is enclosed, unless otherwise indicated.
3. It is believed that no fees are due in connection with this Information Disclosure Statement. However, should any fees be due, the Commissioner is authorized to charge Deposit Account No. 11-0600 for such fees. A duplicate copy of this communication is enclosed for charging purposes.

Dated: 3/12/04

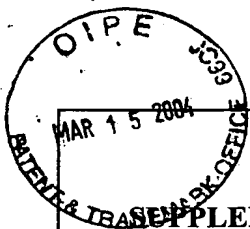
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**SUPPLEMENTAL INFORMATION
DISCLOSURE STATEMENT
BY APPLICANT
PTO-1449**

DOCKET NO.
10020/30301

SERIAL NO.
10/723,953

APPLICANT
FORREST, et al.

FILING DATE
November 26, 2003

GROUP
1772

U. S. PATENT DOCUMENTS

EXAMINER INITIAL	PATENT NUMBER	PATENT DATE	NAME	CLASS	SUBCLASS	FILING DATE
	6,013,982	January 11, 2000	Thompson et al.			
	6,087,196	July 11, 2000	Sturm et al.			
	6,097,147	August 1, 2000	Baldo et al.			
	6,294,398	September 25, 2001	Kim et al.			
	6,337,102	January 8, 2002	Forrest et al.			
	6,333,458	December 25, 2001	Forrest et al.			
	6,451,415	September 17, 2002	Forrest et al.			
	6,468,819	October 22, 2002	Kim et al.			
	6,580,027	June 17, 2003	Forrest et al.			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

OTHER DOCUMENTS

EXAMINER INITIAL	AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
	FORREST et al., "Active Optoelectronics Using Thin-Film Organic Semiconductors," IEEE J. Sel. Top. Quantum Electron. 6, 1072 (2000)
	PEUMANS et al., "Efficient Photon Harvesting at High Optical Intensities in Ultrathin Organic Double-Heterostructure Photovoltaic Diodes," Appl. Phys. Lett. 76, 3855 (2000)
	PEUMANS et al., "Small Molecular Weight Organic Thin-Film Photodetectors and Solar Cells," J. Appl. Phys. 93, 3693 (2003)
	TANG et al., "Two-Layer Organic Photovoltaic Cell," Appl. Phys. Lett. 48, 183 (1986)
	SHAH et al., "Photovoltaic Technology: The Case for Thin-Film Solar Cells," Science 285, 692 (1999)
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	PEUMANS et al., "Efficient, High-Bandwidth Organic Multilayer Photodetectors," Appl. Phys. Lett. 76, 2650-52
	WELFORD et al., "High Collection Nonimaging Optics", Academic Press, pp. 172-175 (1989)
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	FOWLER et al., "Electron Emission in Intense Electric Fields," Proc. R. Soc. London Ser. A 119, 173 (1928)
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EXAMINER INITIALS	AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
	HILL et al., "Organic Semiconductor Heterointerfaces Containing Bathocuproine," J. Appl. Phys. 86, 2116 (1999)
	FORREST, "Ultrathin Organic Films Grown by Organic Molecular Beam Deposition and Related Techniques," Chem. Rev. 97, 1793 (1997)
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	UENO et al., "Parabolic Dispersion and Effective Mass of Hot Electrons in Oriented Thin Films of Copper Phthalocyanine Determined by Means of Low-Energy-Electron Transmission," Phys. Rev. B 44, 6472 (1991)
	GU et al., "Transparent Organic Light Emitting Devices," Appl. Phys. Lett. 68, 2606 (1996)
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	DRECHSEL et al., "Organic Mip-diodes by p-doping of amorphous wide-gap semiconductors: CV and impedance spectroscopy," Synth. Met. 127, 201-205 (2002)
	SHIROTA et al., "Multilayered Organic Electroluminescent device Using a Novel Starburst Molecule, 4,4',4"-tris(3-methylphenylphenylamino)triphenylamine, as a hole transport material," Appl. Phys. Lett. 65, 807 (1994)
	DJURISIC et al., "Indium-tin-oxide Surface Treatments: Influence on the performance of CuPc/C ₆₀ solar cells," J. Appl. Phys. 93, 5472 (2003)
	Shtein, et al., U.S. Patent Application No. 10/233,470, filed September 4, 2002, entitled "Process and Apparatus for Organic Vapor Jet Deposition".

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	